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Regulations for the construction of monitoring and supervision system in metal and nonmetal underground mine

金属非金属地下矿山监测监控系统建设规范

(English Translation)

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Foreword

ChinaStandards.net is in charge of this English translation. In case of any doubt about the English translation, the Chinese original shall be considered authoritative.

This standard is compulsory.

This standard is used for standardizing the installation, maintenance and management of monitoring and supervision system in metal and nonmetal underground mines.

This standard was proposed by the State Administration of Work Safety.

This standard is under the jurisdiction of the Subcommittee on Non-coal Mine Safety of National Technical Committee on Safety Production of Standardization Administration of China (TC288/SC2).

This standard is issued for the first time.

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Regulations for the construction of monitoring and supervision system in metal and nonmetal underground mine

1 Scope

This standard specifies the installation, maintenance and management requirements for monitoring and supervision system in metal and nonmetal underground mine.

This standard is not applicable to metal and nonmetal underground mine coexisting and associated with coal.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 16423-2006 *Safety regulations for metal and nonmetal mines*
GB 50026-2007 *Code for engineering surveying*
GB 50198-1994 *Technical code for regulation of civil closed circuit monitoring TV system*
GB 50395-2007 *Code of design for video monitoring system*
AQ 2013.1 *Ventilation technical standards for metal and nonmetal underground mines ventilation system*
AQ 2013.3 *Ventilation technical standards for metal and nonmetal underground mines ventilation system detection*
EJ 378-1989 *Method for determination of radon and radon daughters in the air of uranium mines*

3 Terms and definitions

3.1
monitoring and supervision system
system composed of host, transmission interface, transmission cable, substation, transducer and other equipment and management software, which has the functions of information collection, transmission, storage, processing, display, printing and acousto-optic alarm, and is used for monitoring the concentration of deleterious harmful gases in metal and nonmetal underground mines, as well as wind speed, wind pressure, temperature, smoke, fan start/stop state, ground pressure, etc.

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3.2
host
computer device which is used for receiving monitoring signals and has the functions of correction, alarm discrimination, data statistics, disk storage, display, acousto-optic alarm, man-machine dialog, output control, printout control, etc.

3.3
substation
device in a monitoring and supervision system which is used for receiving signals from transducers, transmitting them to a transmission interface in a long distance according to a pre-agreed multiplexing mode, and receiving multiplexed signals from the transmission interface simultaneously

3.4
transducer
device that converts measured physical quantities into electrical signals for output

3.5
deleterious harmful gas transducer
device for continuously monitoring the concentration of deleterious harmful gases such as carbon monoxide, nitrogen dioxide, hydrogen sulfide and sulfur dioxide in the ambient gas of underground mines

3.6
on-off status transducer
device for continuously monitoring the "on" or "off" operating status of electromechanical equipment in underground mines

3.7
mine monitoring equipment
general term of transducers, substations and cables used for monitoring and supervision under mine shaft

3.8
portable deleterious gas alarm detector
portable instrument with functions of gas concentration display and over-limit alarm

4 Construction principles

4.1 The monitoring and supervision system of metal and nonmetal underground mines shall be improved according to the requirements of GB 16423-2006 and the actual construction of mines.

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